



Master Lesson Plan

For

Tables and Shares

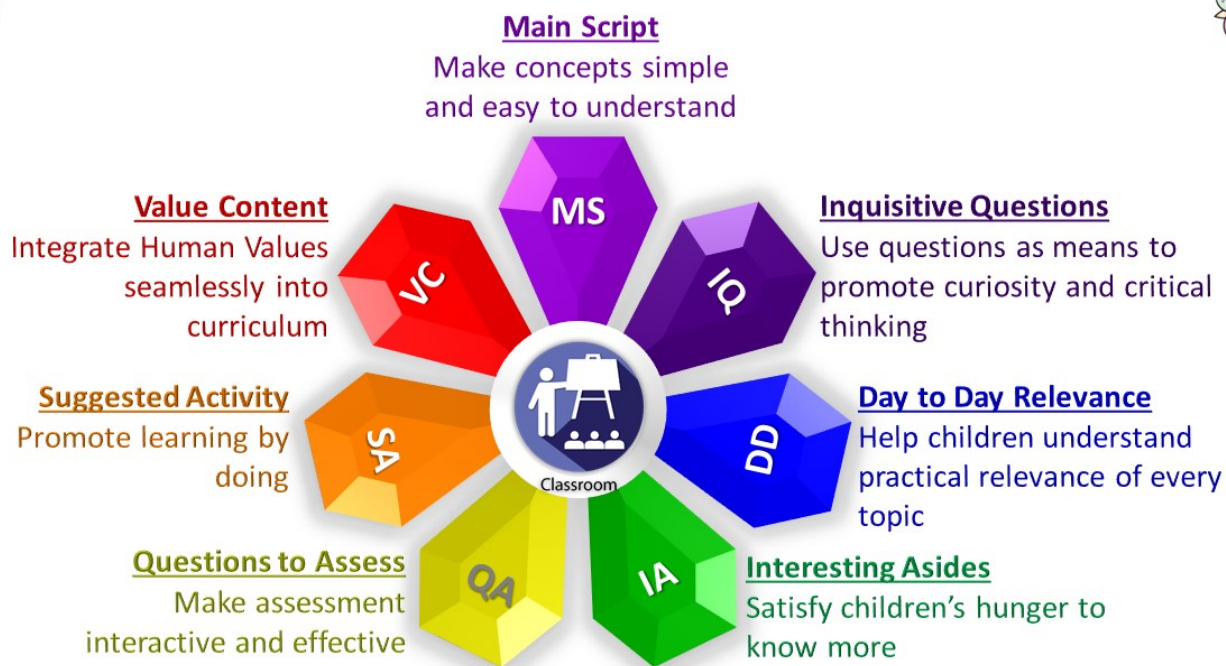
Board	Standard	Subject	Chapter	Language	Reference Link	Creation date
CBSE	STD IV	Mathematics	Tables and Shares	English	Tables and Shares	2021-01-10 13:30:02

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Master Lesson Plan (MLP) - Covers the entire chapter with the help of these 7 asset types



For more information on how to use the lesson plan effectively, please scroll to the guidelines at the end of this document.

Tables and Shares

1. MS_Objectives_Tables and Shares

Notes to the teacher: This asset lays down the proposed plan for transacting this chapter. It states the asset objectives of the MLP. This asset is for Teacher's reference and need not be taught to the students.

Students will be able to:

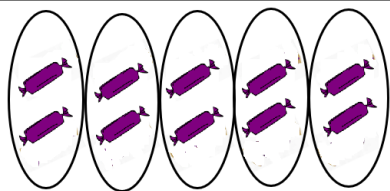
- Identify that multiplication is repeated addition and learn about its properties.
- Skip count 2, 3 and 4.
- Know the facts about multiplication.
- Recognise various situations in which we use multiplication.
- Multiply using chart.
- Multiply 3 digit by 2 digit number and 3 digit by 3 digit number.
- Identify that division is repeated subtraction.
- Recognise various situations in which we use Division.
- Divide 3 digit number by a 2 digit number.
- Students will be able to appreciate the need to reduce their desires and increase their own happiness as well as that of others

Time to teach	Asset Type	Theme	SubTheme
5 Minutes	Main Script	Numbers	Arithmetic Operations on Numbers, Arithmetic Operations on Numbers

2. MS_Multiplication and its properties

Materials Required: Candies 10

1. Teacher shall start the class by asking 5 students to come forward.
2. Teacher gives two chocolates each to all the 5 students.
3. Teacher asks how many chocolates was distributed totally.



$$2 + 2 + 2 + 2 + 2 = 10$$

This can be read as 5 groups of 2.

Group of is represented by the multiplication symbol X.

$$5 \times 2 = 10$$

This is read as “five times two is 10”

1. So, **multiplication** is nothing but adding the same number repeatedly, in other words, repeated addition is called **multiplication**.
2. When we add the same number repeatedly we use multiplication.
3. We are repeatedly adding 2 chocolates for 5 students

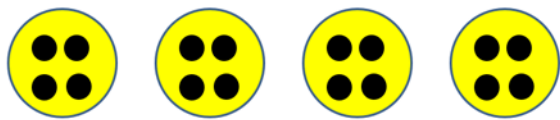
$$2 + 2 + 2 + 2 + 2 = 10$$

5 groups of 2 is 10

$$5 \times 2 = 10$$

5 and 2 are called **factors** and 10 the **product**.

Take 4 circular papers and make four dots on each paper. Now count how many dots are there in all.



$$4 + 4 + 4 + 4 = 16$$

4 groups of 4 is 16

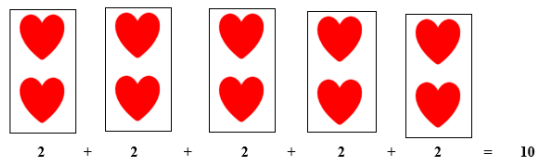
$$4 \times 4 = 16$$

Properties of Multiplication:

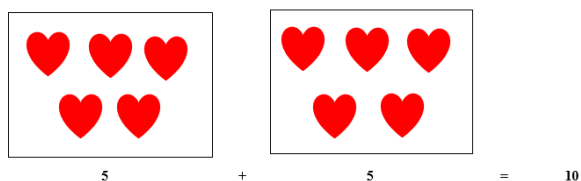
Multiplication has four main properties

- 1) **Commutative property**: Changing the order of factors does not change the product

$$5 \times 2 = 2 \times 5 = 10$$



$$5 \times 2 = 10$$



$$2 \times 5 = 10$$

2) **Associative Property:** Changing the grouping of factors does not change the product.

$$(3 \times 2) \times 4 = 3 \times (2 \times 4)$$

$$6 \times 4 = 3 \times 8$$

$$24 = 24$$

3) **Identity Property:** The product of 1 and any number is the number itself.

$$1 \times 7 = 7$$

$$1 \times 12 = 12$$

4) **Zero Property:** The product of 0 and any number is 0.

$$0 \times 7 = 0$$

$$0 \times 12 = 0$$

$$0 \times 10 = 0$$

Image Source:

- <http://www.clker.com/clipart-purple-candy-bar.html>

Time to teach	Asset Type	Theme	SubTheme
15 Minutes	Main Script	Multiplication	Multiplication of numbers as repeated addition, Multiplication of numbers as repeated addition

3. IQ_Skip counting

Is there a relation between skip counting and multiplication?

Answer: Yes. Skip counting helps us to understand multiplication, in multiplication we skip

count using equal groups.

1) Explain by giving examples.

Skip counting by 3 is the multiplication table of 3

3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, 42...

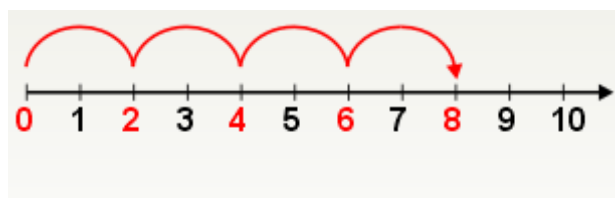
Skip counting by 4 is the multiplication table of 4

4, 8, 12, 16, 20, 24, 28, 32, 36, 40, 44, 48, 52, 56,....

Skip counting by 2 is the multiplication table of 2

2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, ...

Show it in number line chart.



Time to teach	Asset Type	Theme	SubTheme
3 Minutes	Inquisitive Questions	Multiplication	Multiplication Tables-1 to 10 by skip counting, Multiplication Tables-1 to 10 by skip counting

4. IA_Facts about Multiplication

1) In 1980, Shakuntala Devi from India entered the Guinness Book of Records as the world's fastest multiplier when she correctly multiplied two 13-digit numbers in 28 seconds.



2) Over 4000 years ago Babylonians were the first to use multiplication table. But it was different from the one we are using now.



Image Source:

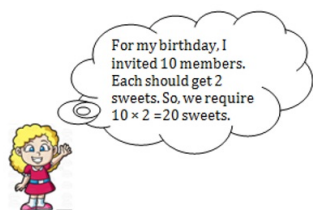
- <http://www.clker.com/clipart-420712.html>

Time to teach	Asset Type	Theme	SubTheme
3 Minutes	Interesting Asides	Multiplication	Multiplication tables, Multiplication tables

5. DD_Multiplication in real life

Teacher shall discuss the following situations in which we use multiplication:

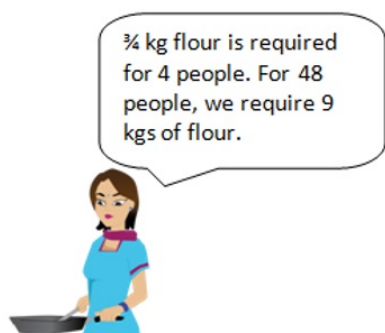
- 1) To calculate the number of days in 4 months or in 28 months we use multiplication.
- 2) While planning for parties.



- 3) Estimating cost for buying gifts for the friends.



- 4) While cooking in a bulk for many people. If a recipe calls for $\frac{3}{4}$ of flour for 4 people and when you want to cook for 48 people, we multiply the ingredients.



- 5) While budgeting.



6) Calculating travel expenses while planning for a holiday.



Image Source:

- <http://www.clker.com/clipart-577375.html>
- <http://www.clker.com/clipart-729810.html>
- <https://openclipart.org/detail/286263/woman-cooking>
- <https://pixabay.com/photos/accounting-bill-billing-finance-57284/>
- <https://pixabay.com/photos/money-bills-calculator-save-256312/>

Time to teach	Asset Type	Theme	SubTheme
2 Minutes	Day-to-day Relevance	Multiplication	Multiplication tables, Multiplication tables

6. SA_Skip counting game

Aim: To learn how to skip count through a game.

Resources Required: Nil

Setting for the Activity : Indoor

Type of Activity: Play

Procedure:

1. Make students sit in a circle.
2. Ask them to skip count in 2 first, first student will say 2, second will say 4, third will say 6 and so on. Have a range for each number. For this skip counting in two keep the range as 20. Whoever says 20 is out and game goes on starting from 2, till one student is left.
3. Then start with any other number like 3 or 4 or 5 and continue the game and keep different range for different numbers.

Conclusion: Thus students learn how to skip count through a game.

Time to teach	Asset Type	Theme	SubTheme
5 Minutes	Suggested Activity	Multiplication	Multiplication Tables-1 to 10 by skip counting, Multiplication Tables-1 to 10 by skip counting

7. QA_ Identify the properties of multiplication

No	Expression	Property
1	$8 \times 9 = 9 \times 8$	
2	1×13	
3	$9 \times (4 \times 7) = (9 \times 4) \times 7$	
5	6×1	
6	$7 \times 13 = 13 \times 7$	
7	2×1	
8	$5 \times (4 \times 8) = (5 \times 4) \times 8$	
9	$0 \times 4 = 0$	

Answers:

No	Expression	Property
1	$8 \times 9 = 9 \times 8$	Commutative Property
2	1×13	Identity Property
3	$9 \times (4 \times 7) = (9 \times 4) \times 7$	Associative Property
5	6×1	Identity Property
6	$7 \times 13 = 13 \times 7$	Commutative Property
7	2×1	Identify
8	$5 \times (4 \times 8) = (5 \times 4) \times 8$	Associative Property
9	$0 \times 4 = 0$	Zero Property

Time to teach	Asset Type	Theme	SubTheme
3 Minutes	Assessments	Multiplication	Properties of Multiplication, Properties of Multiplication

8. MS_ Multiplication table using pattern

Materials Required: Pattern chart as given in the picture

1. Teacher shall show the chart to the students.
2. The numbers in green are the factors.
3. The numbers in light blue are the product.
4. Write numbers from 0 to 9 in the first row and column.
5. Mark multiplication sign X in the first cell where the first row and first column meets.
6. In the second row, according to zero property any number multiplied by 0 is 0.
7. In the third row, according to the identity property any number multiplied by 1 is the same number.
8. What pattern is seen in the fourth row 2, 4, 6, 8, 10 .. it is skip counting by 2.
9. Fifth row is skip counting by 3, that is 3, 6, 9, 12,..
0. Sixth row is skip counting by 4, this goes on till the 12 row, which is skip counting by 10.

1. What pattern is seen in the seventh row 5, 10, 15, 20, 25, .. it is skip counting by 5.
2. When a number is multiplied by 5, the ones place in the product is either 0 or 5.
3. When a number is multiplied by 10, the ones place in the product is always 0.

x	0	1	2	3	4	5	6	7	8	9	10
0	0	0	0	0	0	0	0	0	0	0	0
1	0	1	2	3	4	5	6	7	8	9	10
2	0	2	4	6	8	10	12	14	16	18	20
3	0	3	6	9	12	15	18	21	24	27	30
4	0	4	8	12	16	20	24	28	32	36	40
5	0	5	10	15	20	25	30	35	40	45	50
6	0	6	12	18	24	30	36	42	48	54	60
7	0	7	14	21	28	35	42	49	56	63	70
8	0	8	16	24	32	40	48	56	64	72	80
9	0	9	18	27	36	45	54	63	72	81	90
10	0	10	20	30	40	50	60	70	80	90	100

Factors (pointing to columns)

Product (pointing to rows)

To find the multiples of 3 using this chart, find the number 3 in vertical column and then find corresponding factor in horizontal column like 3 and 1, 3 and 2, 3 and 3 etc. The multiples of 3 are given in yellow colour.

x	0	1	2	3	4	5	6	7	8	9	10
0	0	0	0	0	0	0	0	0	0	0	0
1	0	1	2	3	4	5	6	7	8	9	10
2	0	2	4	6	8	10	12	14	16	18	20
3	0	3	6	9	12	15	18	21	24	27	30
4	0	4	8	12	16	20	24	28	32	36	40
5	0	5	10	15	20	25	30	35	40	45	50
6	0	6	12	18	24	30	36	42	48	54	60
7	0	7	14	21	28	35	42	49	56	63	70
8	0	8	16	24	32	40	48	56	64	72	80
9	0	9	18	27	36	45	54	63	72	81	90
10	0	10	20	30	40	50	60	70	80	90	100

Factors (pointing to columns)

Product (pointing to rows)

To find the product of the factors 6 and 5, that is

$6 \times 5 = 30$ (the number 6 in row and 5 in column in yellow colour meets)

x	0	1	2	3	4	5	6	7	8	9	10
0	0	0	0	0	0	0	0	0	0	0	0
1	0	1	2	3	4	5	6	7	8	9	10
2	0	2	4	6	8	10	12	14	16	18	20
3	0	3	6	9	12	15	18	21	24	27	30
4	0	4	8	12	16	20	24	28	32	36	40
5	0	5	10	15	20	25	30	35	40	45	50
6	0	6	12	18	24	30	36	42	48	54	60
7	0	7	14	21	28	35	42	49	56	63	70
8	0	8	16	24	32	40	48	56	64	72	80
9	0	9	18	27	36	45	54	63	72	81	90
10	0	10	20	30	40	50	60	70	80	90	100

Factors (pointing to columns)

Product (pointing to rows)

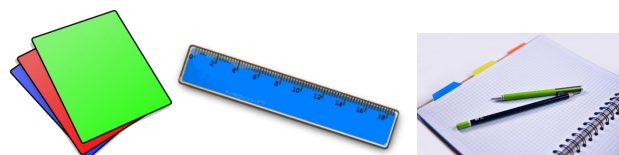
Time to teach	Asset Type	Theme	SubTheme
15 Minutes	Main Script	Multiplication	Grid Multiplication, Grid Multiplication

9. SA_Multiplication Chart

Aim: To make a multiplication chart.

Resources Required(for each student):

A square coloured paper, scale, pencil and pen



Procedure:

1. Ask students to make multiplication chart as shown in the picture.
2. Give each one different factors and ask them to find the product by highlighting it.

x	0	1	2	3	4	5	6	7	8	9	10	Factors
0	0	0	0	0	0	0	0	0	0	0	0	
1	0	1	2	3	4	5	6	7	8	9	10	
2	0	2	4	6	8	10	12	14	16	18	20	
3	0	3	6	9	12	15	18	21	24	27	30	
4	0	4	8	12	16	20	24	28	32	36	40	
5	0	5	10	15	20	25	30	35	40	45	50	
6	0	6	12	18	24	30	36	42	48	54	60	
7	0	7	14	21	28	35	42	49	56	63	70	
8	0	8	16	24	32	40	48	56	64	72	80	
9	0	9	18	27	36	45	54	63	72	81	90	
10	0	10	20	30	40	50	60	70	80	90	100	
												Product
												Factors

Conclusion: Thus, students will know to make a multiplication chart.

Image Source:

- <http://www.clker.com/clipart-pile-of-paper.html>
- <http://www.clker.com/clipart-blue-ruler.html>
- <https://www.publicdomainpictures.net/en/view-image.php?image=239750&picture=notebook-with-pen-and-pencil>

Time to teach	Asset Type	Theme	SubTheme
10 Minutes	Suggested Activity	Multiplication	Grid Multiplication, Grid Multiplication

10. QA_Multiplication worksheet

Using Multiplication chart complete the following table

x	0	1	2	3	4	5	6	7	8	9	10
0	0	0	0	0	0	0	0	0	0	0	0
1	0	1	2	3	4	5	6	7	8	9	10
2	0	2	4	6	8	10	12	14	16	18	20
3	0	3	6	9	12	15	18	21	24	27	30
4	0	4	8	12	16	20	24	28	32	36	40
5	0	5	10	15	20	25	30	35	40	45	50
6	0	6	12	18	24	30	36	42	48	54	60
7	0	7	14	21	28	35	42	49	56	63	70
8	0	8	16	24	32	40	48	56	64	72	80
9	0	9	18	27	36	45	54	63	72	81	90
10	0	10	20	30	40	50	60	70	80	90	100

1. $4 \times 7 =$ _____
2. $9 \times 6 =$ _____
3. $3 \times 7 =$ _____
4. $6 \times 2 =$ _____
5. $5 \times 9 =$ _____
6. $7 \times 4 =$ _____
7. $2 \times 0 =$ _____
8. $8 \times 3 =$ _____
9. $1 \times 5 =$ _____
0. $10 \times 7 =$ _____

Answer:

1. $4 \times 7 =$ _____ 28 _____
2. $9 \times 6 =$ _____ 54 _____
3. $3 \times 7 =$ _____ 21 _____
4. $6 \times 2 =$ _____ 12 _____
5. $5 \times 9 =$ _____ 45 _____
6. $7 \times 4 =$ _____ 28 _____
7. $2 \times 0 =$ _____ 02 _____
8. $8 \times 3 =$ _____ 24 _____
9. $1 \times 5 =$ _____ 5 _____
0. $10 \times 7 =$ _____ 70 _____

Time to teach	Asset Type	Theme	SubTheme
5 Minutes	Assessments	Multiplication	Grid Multiplication, Grid Multiplication

11. MS_Multiply 3 digit by 2 digit number

1. Teacher shall ask the students some multiplication facts.
2. Encourage the students to memorize the multiplication facts.
3. If not, let them use the multiplication card.

x	0	1	2	3	4	5	6	7	8	9	10
0	0	0	0	0	0	0	0	0	0	0	0
1	0	1	2	3	4	5	6	7	8	9	10
2	0	2	4	6	8	10	12	14	16	18	20
3	0	3	6	9	12	15	18	21	24	27	30
4	0	4	8	12	16	20	24	28	32	36	40
5	0	5	10	15	20	25	30	35	40	45	50
6	0	6	12	18	24	30	36	42	48	54	60
7	0	7	14	21	28	35	42	49	56	63	70
8	0	8	16	24	32	40	48	56	64	72	80
9	0	9	18	27	36	45	54	63	72	81	90
10	0	10	20	30	40	50	60	70	80	90	100

1. Take for example two factors 452×5
2. If the numbers are (factors are) given side by side, it must be written one below the other in line with the place value of each number.
3. A multiplication sign is put to the left of the second factor
4. Bottom number has only one digit.
5. Multiply it with all the digits at the top

$$\begin{array}{r} 4 \quad 5 \quad 2 \\ \times \quad \quad 5 \\ \hline \end{array}$$

1. 2×5 is 10. We write 0 at the ones place and carry over 1 to the tens place like how we do for addition.

$$\begin{array}{r} \text{1} \\ 4 \quad 5 \quad 2 \\ \times \quad \quad 5 \\ \hline 0 \end{array}$$

1. Then multiply 5×5 that is 25, add the carry over 1 to this, it becomes 26, write 6 at the bottom and carry over 2.

$$\begin{array}{r} \text{2} \quad \text{1} \\ 4 \quad 5 \quad 2 \\ \times \quad \quad 5 \\ \hline 6 \quad 0 \end{array}$$

1. Then multiply 5×4 that is 20, add the carry over 2 to this, it becomes 22, write 22 below because no more digit at the top to multiply further.

$$\begin{array}{r} \text{2} \quad \text{1} \\ 4 \quad 5 \quad 2 \\ \times \quad \quad 5 \\ \hline 2 \quad 2 \quad 6 \quad 0 \end{array}$$

1. To multiply a 3-digit number by a 2-digit number.
2. For example: 546×35

3. Let us multiply two factors 546×35

4. There are two digits for the second factor. First we have to multiply with ones place and then with tens place.

5. $5 \times 6 = 30$. Write 0 down and carry over 3 to the tens place of the first factor.

$$\begin{array}{r} \text{3} \\ 546 \\ \times 35 \\ \hline 0 \end{array}$$

1. Then $5 \times 4 = 20$. Add the carry over 3 to this, it becomes 23. Write 3 down and carry over 2 to the hundreds place.

$$\begin{array}{r} \text{2} \quad \text{3} \\ 546 \\ \times 35 \\ \hline 30 \end{array}$$

1. Then $5 \times 5 = 25$. Add the carry over 2 to this, it becomes 27. No more digits to multiply in the first factor. So, write 27 down.

$$\begin{array}{r} \text{2} \quad \text{3} \\ 546 \\ \times 35 \\ \hline 2730 \end{array}$$

1. Write a 0 in ones place at the bottom and lock it. Before starting to multiply by the tens digit in the second factor.

2. Then multiply the first factor with the tens digit of the second factor. $3 \times 6 = 18$. Write 8 down and carry over 1 to the hundreds place of the first factor.

$$\begin{array}{r} \text{1} \\ \text{2} \quad \text{3} \\ 546 \\ \times 35 \\ \hline 2730 \\ 80 \end{array}$$

1. Then multiply $3 \times 4 = 12$. With this add the carry over 1, it becomes 13. Write 3 down and write 1 as carry over.

$$\begin{array}{r}
 11 \\
 23 \\
 546 \\
 \times 35 \\
 \hline
 2730 \\
 380 \\
 \hline
 380
 \end{array}$$

1. Multiply $3 \times 5 = 15$, add the carry over 1 with this, it becomes 16. Write 16 down as no more digits to multiply. Then add both the numbers in yellow to get the final product.

$$\begin{array}{r}
 11 \\
 23 \\
 546 \\
 \times 35 \\
 \hline
 2730 \\
 16380 \\
 \hline
 19110
 \end{array}$$

Time to teach	Asset Type	Theme	SubTheme
15 Minutes	Main Script	Multiplication	Multiply 3 digit number by 2 digit number Multiply 3 digit number by 2 digit number

12. IQ_Multiply 3 digit by 3 digit number

Shreya bought 350 gifts for her House warming ceremony. Each gift costs about Rs 540. What is the total cost of all the gifts? (Let the students try doing 3 by 3 digits)



Ans. Rs 1,89,000

Reference URL for the image:

- <https://www.publicdomainpictures.net/en/view-image.php?image=110468&picture=the-gifts>

Time to teach	Asset Type	Theme	SubTheme
3 Minutes	Inquisitive Questions	Multiplication	Multiply 3 digit number by 3 digit number Multiply 3 digit number by 3 digit number

13. SA_Finding the cost

Aim: Find out the unit price and calculate for number of quantities given.

Resources Required: Print out of the table for all the students.

No.	Items	Cost	Quantity	Total
1	Shirt for a 15 year old		25	
2	Saree		17	
3	Frock		28	
4	Pant		123	
			Grand total	

Procedure:

Go to a readymade clothes shop. Find the cost of the following items and find the total cost and grand total of the clothes purchased.

No.	Items	Cost	Quantity	Total
1	Shirt for a 15 year old		25	
2	Saree		17	
3	Frock		28	
4	Pant		123	
			Grand total	

Instructions to Teacher: It is an individual activity.

Conclusion: Thus, the students will be able to find the cost of the purchase they are doing.

Time to teach	Asset Type	Theme	SubTheme
10 Minutes	Suggested Activity	Multiplication	Multiplication Word Problems (2,3 digits) Multiplication Word Problems (2,3 digits)

14. QA_Word problems on multiplication

Answer the following:

1) Find the number of days in 26 weeks.

Answer: 182 days

2) A water can vendor sells one water can for ₹ 45. Every day he sells an average of 60 water cans. How much he earns every day?



Answer: ₹ 2,700

3) A photocopy machine copies 35 pages per minute. How many pages will it copy in 120 minutes?



Answer: 4,200 Pages

4) There are 110 flats in one block. How many flats are there in 250 blocks?



Answer: 27,500 flats

5) A bakery produces 350 cupcakes in one day. How many cupcakes will it produce in 125 days?



Answer: 43,750 cupcakes

Image Source:

- <https://openclipart.org/detail/275825/three-delicious-cupcakes>
- <https://www.publicdomainpictures.net/en/view-image.php?image=234918&picture=chinese-apartment-building>
- <http://www.clker.com/clipart-xerox-photocopy-machine.html>

- <https://pixnio.com/people/female-women/woman-gets-clean-drinking-water>

Time to teach	Asset Type	Theme	SubTheme
5 Minutes	Assessments	Multiplication	Multiplication Word Problems (2,3 digits) Multiplication Word Problems (2,3 digits)

15. MS_Division_properties _Division facts

Materials Required: 20 colour pencils

1. Teacher shall start the class by calling 5 students to the front.
2. Teacher shall ask one student to distribute 20 pencils equally among 5 students.



1. To do this the pencils will be divided or shared equally among 5 students.
2. Divide means Separated.
3. To start with give one colour pencil to each student. When 5 pencils are distributed, 15 pencils will be remaining. If 5 more are distributed. 10 will be remaining, 5 more are distributed, 5 will be remaining and again if 5 more are distributed, nothing will remain.

$$20 - 5 = 15$$

$$15 - 5 = 10$$

$$10 - 5 = 5$$

$$5 - 5 = 0$$

- Pencils must be distributed till nothing is left
- How many times 5 is subtracted, 4 times.

$$20 \div 5 = 4$$

- This is the symbol for $\div$
- Division is nothing but repeated subtraction. This is opposite of multiplication.

Example:

78 chocolates are distributed to 25 children equally. How many chocolates each child will get?

$$75 - 25 = 50$$

$$50 - 25 = 25$$

$$25 - 25 = 0$$

25 is subtracted 3 times, hence

$$75 \div 25 = 3$$

Properties of Division:

1) Identity Property: Any number divided by 1 is the same number

$$6 \div 1 = 6$$

2) Zero Property: Zero divided by any number is zero.

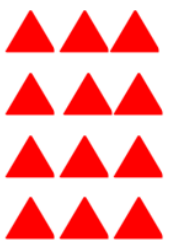
$$0 \div 5 = 0$$

Checking Division facts using multiplication facts

1. Teacher shall start the class by saying that division is the opposite of multiplication.
2. Multiplication and division are related.
3. Teacher can explain the class by stating that in multiplication the number we multiply are called factors and the answer we get is called product.
4. In division, the number we are dividing is called dividend, the number that we use to divide is called divisor, and the answer we get is called quotient.



$$3 \times 4 = 12$$



$$12 \div 4 = 3$$



$$12 \div 3 = 4$$

Students can check their work using this inverse operation.

Image Source:

- <https://www.publicdomainpictures.net/en/view-image.php?image=1786&picture=colored-pencils>

15 Minutes	Main Script	Division	Divides a given number by repeated subtraction, Divides a given number by repeated subtraction
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16. IQ_Division and multiplication fact families

Multiplication and division are fact families.

- Consider the number 3, 6 and 18. We know $3 \times 6 = 18$. Also $18 \div 6$ is 3. In a family we have only family members not the outsiders. Like that in a fact family we see only three numbers.



- 3, 6 and 18 are members of fact family.
- 5, 6, 7 and 9 can't make fact family because there are too many members.
- 5, 6, 9 are also not a fact family because they don't share multiplication and division facts.

Reference URL for the images:

- <http://www.clker.com/clipart-family-silhouette.html>

Time to teach	Asset Type	Theme	SubTheme
3 Minutes	Inquisitive Questions	Division	Relates division with multiplication, Relates division with multiplication

17. IA_Division

Different Terms in Division:

- Divide 250 by 6.
- $250 \div 6$ will be written as given below
- 250 is known as **dividend, the number that is being divided.**
- 6 is known as **divisor, the number that is used to divide the dividend.**
- 41 is the **Quotient, the number obtained by dividing two numbers.**
- 4 is the **Remainder, the number that is left after dividing.**

$$\begin{array}{r}
 \text{Quotient} \\
 \downarrow \\
 \boxed{41} \\
 \text{Divisor} \rightarrow \boxed{6} \quad \boxed{250} \leftarrow \text{Dividend} \\
 - 24 \\
 \hline
 10 \\
 - 6 \\
 \hline
 \boxed{4} \leftarrow \text{Remainder}
 \end{array}$$

Time to teach	Asset Type	Theme	SubTheme
3 Minutes	Interesting Asides	Division	Terms in division (dividened,divisor,quotient,remainder), Terms in division (dividened,divisor,quotient,remainder)

18. DD_Division in Real life

Teacher shall explain different situations in life when we use division.

1) To find the unit price division is used.

5 pens cost is Rs 20. One pen cost is $20 \div 5 = \text{Rs}4$.



2) Division is used in cooking, handling money.

For 400 gms of rice we require two spoons. So for 200 gms we require only one spoon.



3) To distribute anything equally.

4) When the coach distributes the time to all his trainee.



5) When we divide household chores among people in the family.

6) We have 4 tasks: Gardening, cleaning, cooking and vegetable cutting. We are 4 members
So, Each one of us has to carry out one task.



Image Source:

- <http://www.clker.com/clipart-729810.html>
- <https://openclipart.org/detail/312098/woman-cooking-4>
- <https://pixabay.com/photos/football-soccer-footballers-team-3451408/Family:SA:> <http://www.clker.com/clipart-755658.html>
-

Time to teach	Asset Type	Theme	SubTheme
3 Minutes	Day-to-day Relevance	Division	

19. SA_Division using number chart

Aim: To divide using number chart

Resources Required: Number chart from 1 to 100, counters

Procedure:

Materials Required: Chart with 10 x 10 table as given in the picture. Counters 100 pieces.
(tamarind seeds can also be used as counters)

	1	2	3	4	5	6	7	8	9	10
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										



1. The below picture has 10 columns and 10 rows. Write numbers as given in the picture.

2. Using the chart and counters student can divide easily
3. For $35 \div 7$
4. The divisor is taken in the rows, that is 7. The counting should not go beyond 7th row.
5. Take 35 counters as 35 is the dividend, start keeping counter from one as shown in the diagram till 7th row . Then, start second column and proceed till 7th row. Then start with 3rd column.
6. Continue this way till all the counters are finished.

	1	2	3	4	5	6	7	8	9	10
1	●	●	●	●	●					
2	●	●	●	●	●					
3	●	●	●	●	●					
4	●	●	●	●	●					
5	●	●	●	●	●					
6	●	●	●	●	●					
7	●	●	●	●	●					
8										
9										
10										

Counters came up to 5 columns. So, Quotient is

$$35 \div 7 = 5$$

- You can give different numbers to divide, also numbers with remainder.

Instructions to Teacher: It is an individual activity

Conclusion: Thus, students will be able to divide using chart and counters.

Image Souce:

- <http://www.clker.com/clipart-520849.html>

Time to teach	Asset Type	Theme	SubTheme
10 Minutes	Suggested Activity	Division	Division using number chart, Division using number chart

20. QA_Division and multiplication fact checking

Make two division expressions like the one given in the example.

$4 \times 7 = 28$	$28 \div 7 = 4$ $28 \div 4 = 7$	$9 \times 8 = 72$	
$7 \times 5 = 35$		$10 \times 7 = 70$	
$3 \times 9 = 27$		$5 \times 9 = 45$	
$8 \times 8 = 64$		$6 \times 1 = 6$	
$2 \times 9 = 18$		$8 \times 5 = 40$	

Answers

$4 \times 7 = 28$	$28 \div 7 = 4$ $28 \div 4 = 7$	$9 \times 8 = 72$	$72 \div 9 = 8$ $72 \div 8 = 9$
$7 \times 5 = 35$	$35 \div 7 = 5$ $35 \div 5 = 7$	$10 \times 7 = 70$	$70 \div 10 = 7$ $70 \div 7 = 10$
$3 \times 9 = 27$	$27 \div 3 = 9$ $27 \div 9 = 3$	$5 \times 9 = 45$	$45 \div 5 = 9$ $45 \div 9 = 5$
$8 \times 8 = 64$	$64 \div 8 = 8$ $64 \div 8 = 8$	$6 \times 1 = 6$	$6 \div 6 = 1$ $6 \div 1 = 6$
$2 \times 9 = 18$	$18 \div 2 = 9$ $18 \div 9 = 2$	$8 \times 5 = 40$	$40 \div 8 = 5$ $40 \div 5 = 8$

Time to teach	Asset Type	Theme	SubTheme
5 Minutes	Assessments	Division	Relates division with multiplication, Relates division with multiplication

21. MS_Divison of 3 digit number by 2 digit number

Teachers shall start the class by saying division is one of the four basic operations.

1. Write the number on the board $23 \div 4$
2. 4 will not divide 23 equally and some number will be left over.
3. Use long division method to solve this problem.
4. Check the multiplication card to see all the multiples of 4.
5. Rewrite the number in the following form

$$\begin{array}{r} 4 \overline{) 23} \end{array}$$

- When the first digit is smaller than the number we are diving then we put a zero, here 2 is smaller than 4, hence 0 is put at the top.
- $4 \times 5 = 20$ and $4 \times 6 = 24$ which is more than the given number 23, so we will stop at 4×5

$$\begin{array}{r}
 05 \\
 4 \overline{) 23} \\
 \underline{20} \\
 3
 \end{array}$$

- Then subtract 20 from 23, remainder is 3.

Example : Tina's mother bought 135 samosas. If the samosas were distributed among 12 people, how many samosas were left with her.



$$135 \div 12$$

- Write the number in the long division method.
- The steps involved are

1. Divide
2. multiply
3. subtract
4. bring down
5. repeat or remainder

- Dividend is 135 and divisor is 12
- 12 is bigger than the first digit of the dividend, so take first two digits of the dividend to divide.
- Check how many 12's are there in 13.
- 1 time, write 1 in the quotient.
- Multiply 1 times 12 and write below 13.
- Then subtract 12 from 13, we get 1
- Bring down the next digit of the dividend, that is 5, the number becomes 15
- Now again check how many 12's are there in 15
- It is 1 again, write that in the quotient.
- Multiply 1 times 12 and write below 15
- Then subtract 12 from 15
- The remainder is 3

- The quotient is 11

$$\begin{array}{r}
 11 \\
 12 \overline{) 135} \\
 \underline{- 12} \\
 15 \\
 \underline{- 12} \\
 3
 \end{array}$$

Image Source:

- <https://www.publicdomainpictures.net/en/view-image.php?image=278737&picture=samosa>

Time to teach	Asset Type	Theme	SubTheme
20 Minutes	Main Script	Division	Division of 3 digit numbers, Division of 3 digit numbers

22. IQ_Frame questions

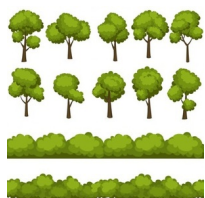
Frame questions for the following statement.

- 1) There are 10 packets of rice. Sundar paid ₹ 110 for all the 10 packets. Frame a question for this.



Answer: 10 Packets of rice is ₹ 110, what is the cost of one packet of rice?

- 2) There are 45 plants in 9 rows. Each row has the same number of plants. Frame a question for this.



Answer: 45 Plants are there are 9 rows, how many plants are there in one row?

- 3) There are 100 students in a Nursery school. Everyone comes to school by bus. Same number of students come in all the buses. There are 10 buses in the school. Frame a question for this.



Answer: 100 students come to school in 10 buses, there are an equal number of students in all the bus. How many students are there in one bus?

Image Source:

- <http://www.clker.com/clipart-bag-of-rice.html>
- <http://www.clker.com/clipart-765437.html>
- <https://openclipart.org/detail/228821/school>

Time to teach	Asset Type	Theme	SubTheme
3 Minutes	Inquisitive Questions	Division	Division word problems (2,3 digits), Division word problems (2,3 digits)

23. VC_Make everyone in your life happy

Make everyone in your life happy

We have just learnt about multiplication and how it is used to organize several things of our day to day life.

“Desires, when fulfilled, multiply and become greed and greed always leads to grief. So instead of allowing our desires to be multiplied, we should endeavor to multiply the happiness of people around us.”

Less or Minimum desires multiply the happiness in our life.

Story Time:

A nine Year Boy went to an ICE CREAM shop. He sat at one of the tables there and looked around. A waiter came to him and asked him – “What do you want?”

The boy in return asked the waiter – “How much does Cone Ice cream costs?”

The waiter told him – “it costs Rs 15/-

Then the boy checked his pocket and asked for the cost of a small cone.

Irritated Waiter angrily said: - Rs.12/-

Boy ordered a small cone, had it, paid bill and left.

When the waiter came to pick the empty plate, tears rolled down from his eyes. Those were the tears of appreciation, admiration, joy and gratitude for the boy.

The boy had left Rs.3 as Tip for him.

The boy could give a tip to the waiter by going for a smaller cone of Ice cream instead of a regular sized cone of Ice cream.



Children! Make everyone in your life happy with something you have however little you have. That is life. That is multiplication of happiness. Learn to multiply happiness all around us by limiting your desires, rather than attempting to satisfy them.



Story Source: Sri Sathya Sai Vidya Jyothi Bal Vikas Guru Manual Group II (I)

Image Source:

- Small cone – Clipart, CC <https://pixabay.com/vectors/ice-ice-cream-waffle-dessert-1432275/>
- Boy – Clipart, CC <https://pixabay.com/vectors/boy-kid-child-playing-happy-158152/>
- Shop – Clipart, CC <https://pixabay.com/vectors/shop-candy-home-house-shopping-150362/>
- Cart – Clipart, CC <https://pixabay.com/vectors/ice-cream-cone-cart-umbrella-1544475/>
- <https://pixabay.com/photos/child-soldier-gift-giving-grapes-870377/>

Time to teach	Value Type	Value Sub Type	Value Attribute
3 Minutes	Peace	Happiness	Stories

24. QA_Word Problems on division

Answer the following:

1) Sheetal is arranging books in the library. There are 456 books. She can keep 12 in one shelf. How many shelves will she require. Will there be any remainder?



Answer: 38 Shelves, No remainder

2) Tanya bought 87 red beads to make bracelets. She uses 9 beads for one bracelet. How many beads will be leftover if she uses same number of beads for all the bracelets?



Answer: 6 Beads

3) Kishore's mom made 56 cookies. She wants to distribute equally among 7 children. How many cookies each child will get if she distributes equally?



Answer: 8 Cookies

4) Meha is reading a story book which has 176 pages. She reads 11 pages every day. How many days will she take to finish the book?



Answer: 16 days

5) 48 children are going to the zoo. There are 12 cars going to the zoo. How many children will be in each car, if the same number of children goes in each car?



Answer: 4 Children in one car

Image Source:

- <http://www.clker.com/clipart-397624.html>
- <http://www.clker.com/clipart-744682.html>
- <https://www.publicdomainpictures.net/en/view-image.php?image=147447&picture=red-bead-necklace-closeup>
- <http://www.clker.com/clipart-chocolate-chip-cookie.html>
- <https://www.publicdomainpictures.net/en/view-image.php?image=53648&picture=open-book>

Time to teach	Asset Type	Theme	SubTheme
5 Minutes	Assessments	Division	Division word problems (2,3 digits), Division word problems (2,3 digits)

25. MS_Summary_Tables and Shares

Summary of Tables and Shares

- Repeated addition is called **Multiplication**.
- Multiplication has four main properties: **Commutative, Associative, Identity and Zero property**.
- **Skip Counting** helps us to understand multiplication.
- **Multiplication Chart** can be used to find the product of two numbers.
- **Division** is repeated subtraction.
- Properties of division are **Identity and Zero Property**.
- **Division facts** can be checked using multiplication facts.
- Learn to multiply happiness all around you by limiting your desires, rather than attempting to satisfy them.

Time to teach	Asset Type	Theme	SubTheme
5 Minutes	Main Script	Numbers	Arithmetic Operations on Numbers, Arithmetic Operations on Numbers

Master Lesson Plan

Seven Asset Methodology for MLP

What is the purpose of this Master lesson Plan?	This Master Lesson Plan (MLP) prepared by Sri Sathya Sai Vidya Vahini (SSSVV), covers the entire chapter for the given board. The MLP for the chapter given in the textbook is broken down into smaller modules known as assets. Any chapter can be taught using the 7 asset types in SSSVV methodology. Several different assets together complete the entire chapter. Depending on the requirement, each asset is supported by teaching aids such as animated presentation, audio, video, and learning aids such as worksheets. The MLP is for the teacher's preparation and the teaching aids are for use in the classroom.
How to use it?	You can prepare for your class with this MLP by following 3 simple steps: 1. Read your textbook; 2. Go through the information given in the assets (document & multimedia); 3. Prepare your teaching notes. Great! Now you are ready to transact the chapter.
Duration	Kindly note the duration given for each asset. Due care has been taken in planning the assets, to ensure the chapter is completed within the time specified by the Board. Note: Preparation time is not included in the asset duration. The teaching time depends on the duration of the teaching aids and is not impacted by the length of the MLP.
What is a 'Main Script' (MS) Asset?	The Main Script asset is there for explaining the main concepts of the chapter clearly. The information given in the textbook is simplified, organised and structured to give more clarity. Additionally, you may find a video or mnemonics or a graphic organiser to deepen the understanding of the concept.
How to teach using the MS asset?	Please use the blackboard, slides and interaction to develop the concept.
What is an 'Inquisitive Questions' (IQ) asset?	The Inquisitive Questions asset uses questions to promote higher order thinking like the n^{th} why, what-if, new perspectives, cause-effect, and others, creating curiosity.
How to teach using the IQ asset?	You may use the questions to connect with the students, encourage exploration to engage them in the learning process. You may allow multiple responses and instead of rejecting any of the responses, ask why, before revealing the suggested answer or hints.
What is a 'Day to day Relevance' (DD) Asset?	The Day to Day Relevance asset helps students understand the practical relevance of every topic, making them eager participants in the classroom. If students connect the concepts to their environment, they would learn meaningfully without dislike or simply memorizing for exams.

How to teach using the DD asset?	You may use the asset by asking questions about their experience and use it to establish why they are learning the topic. If necessary you may substitute with a recent or local example.
What is an 'Interesting Aside' (IA) asset?	The Interesting Aside asset uses attention grabbing titbits or anecdotes to bring joy and satisfy the child's hunger to know more. This is a quick/short asset intended to bring attention back to the main concept being taught.
How to teach using the IA asset?	You may use this asset to give a piece of interesting information relevant to the topic, without prolonged explanation/discussion. You may suggest appropriate books for further reading.
What is a 'Suggested Activity' (SA) Asset?	The Suggested Activity asset provides a detailed step by step procedure for the teacher to conduct a hands-on activity. This promotes Activity Based Learning.
How to teach using the SA asset?	You may use this asset to energise your students to learn by doing simple, fun-filled activities based on the topic. The asset includes - preparation, activity, and follow-up. You may engage the students in the preparation and follow-up stages to develop collaboration and responsibility. You could try it once, yourself, before the actual delivery to be more comfortable with it. Note: The duration mentioned in the asset is usually for the activity part only.
What is a 'Value Content' (VC) Asset?	The Value Content asset integrates Universal Human Values (such as empathy, inclusivity, respect for nature that translates into responsible behaviour) seamlessly into the curriculum, as the "End of education is character".
How to teach using the VC asset?	You may use this asset to engage with the students to bring out their innate values and connect with the intrinsic values in the topic/concept. The asset includes pointers on the specific pedagogical technique followed.
What is a 'Questions to Assess' (QA) asset?	The Questions to Assess asset uses an interactive approach to check learning of different types of learners, and provides feedback to the teacher for appropriate action. The questions cater to all the levels of Bloom's Taxonomy. Questions from 'Apply' level and above enable students to reflect on their learning.
How to teach using the QA asset?	You may go through the slides to understand its flow and know when to click for the answer (slides include suggested answers). While presenting in the class, you may display the question and encourage multiple responses, before revealing the answer. In some cases, this asset may include extra questions/worksheet that can be given as homework.